

# More profit from less stuff?

Report on a roundtable for businesses  
May 2016

## Executive Summary

### Background

Dematerialisation is well-established but needs to accelerate if we are to achieve sustainable prosperity. Prosperity needs to be redefined. Business can lead this trend if it can profit from it as it becomes the new normal—not just as a niche

It results partly from a policy response to the environmental crisis, but also from rising raw material and developing world labour costs, technological innovation and changes in taste.

It is, or will be, manifest in more efficient production, more efficient use of durables, electronic delivery of information and music, demand shifting to services and to quality rather than quantity, a greater share of journeys by public transport, higher density housing, and a preference for leisure over spending. This is not an exhaustive list.

Therefore, some businesses will be selling less of whatever it is they currently sell. If they want to grow their revenues, they will have to find new ways of adding value. Non-stuff businesses also face challenges.

### Historical Perspective and current opportunities

We can review some past changes in the way value is created under four headings:

**Convenience**—saving time and reducing hassle. Many of the best-known product innovations in the 19<sup>th</sup> and 20<sup>th</sup> century increased convenience. However, improvements in this area remain fertile ground for innovation, whether from the product itself, the way it is sold, delivered and installed, or after sales support.

**Identity**—helping express who you are. The way products do this has changed repeatedly, following technical and social changes from the 18<sup>th</sup> to the 21<sup>st</sup> century. The question now is what brand values in tune with dematerialisation can play this role in the future—and not just for the customers of Patagonia.

**Sociability**—facilitating good interaction with family, friends and acquaintances. Entrepreneurs have always made money by providing the focus for sociability in new ways—from 18<sup>th</sup> century coffee merchants to Mark Zuckerberg. The question for many businesses now is how they can link their technology to facilitating this kind of benefit.

**Activity**—facilitating activities that require focus or effort, and so produce high levels of wellbeing. As tastes change specific opportunities emerge, but there is a broader question: can business expand these opportunities, for example through information and training?

## Conclusions of the roundtable

While some aspects of dematerialisation will continue to progress, driven as they are by normal commercial imperatives, this is unlikely to be enough to deliver sustainable prosperity. Steps are needed to accelerate the process. However, there are four broad barriers to this happening:

- 1. Acceleration may require public policy measures** which, while they create public goods, also lead to some private losses; losers may lobby effectively—and often have votes
- 2. Acceleration may require disruptive innovation**; existing industry structures may prevent new entrants from supplying this, and incumbents may not need to innovate in the absence of new entrants or pressure from investors
- 3. Acceleration may require discussions within firms that do not normally happen**: these are needed to identify the competitive advantage that will be brought about by the necessary innovation

- 4. Acceleration may require collaboration between firms**—between competitors and up and down the supply chain; while this does happen, more immediate commercial imperatives may prevent this getting the top-level attention it needs.

This implies two types of action: public policy work to address barriers 1 and 2, and work with companies, sectors, supply chains and possibly investors to address barriers 3 and 4. It does not make sense for the latter kind of work to continue at the level of the economy as a whole as the issues tend to be specific to sectors or supply chains.

## Possible follow up work

Roundtables could be on:

- 1. Competition policy and sustainability.** Should it be possible to trigger Competition and Markets Authority market studies as a result of concerns that industry structures are holding back the innovation needed for sustainability? How might this work? Could similar changes be made to Ofgem terms of reference? What would these changes look like?
- 2. Compensating losers.** Who are the likely losers from dematerialisation (companies, individuals, communities)? What can be done to re-equip them to prosper in a more sustainable economy? What is the role of industrial strategy in this and how can the necessary steps be co-ordinated? What is the latest thinking in this area? What are the net costs?
- 3. Sector specific problem analysis.** What are the challenges in this sector? What requires sectoral/supply chain collaboration (and what are the incentives for this)? What is the scope for innovation designed to create competitive advantage? Based on the discussions, it may be that the most important sectors will be food (food waste and how to replace the lost revenues), clothing (recycling), (in both cases

including retailing—sustainable fashion) and housing (supply chain management, building utilisation and landlord/tenant issues).

## Briefing on the Issues

### Introduction

Dematerialisation of the economy—more value created for each unit of ‘stuff’—is a well-established trend in developed countries.<sup>1</sup> This year there have been newspaper articles reporting ‘peak stuff’ quoting remarks from Ikea, declining sales at Apple and consumption patterns detected by Visa. However sustainable prosperity will almost certainly require an acceleration of the trend, involving consumer choices as well as production efficiencies, to the point where absolute quantities of both stuff and waste in the economy fall substantially.<sup>2</sup> An ever greater share of total value will need to be created by human skill and an ever smaller share by raw materials, including fuel. Housing, travel and tourism are likely to be important sectors; the choice and preparation of food, including in the home, will also be important. In short, consumers in the developed world need to redefine prosperity if we are to avoid environmental disaster.

**Business can lead this trend, but only if they can profit from it—and profit from it as becomes the new normal, not a niche.** Hence this roundtable on what added value business can offer customers. Our starting point is that efficiency savings on will reduce costs but will not in themselves add value, that customers will not reward techniques that reduce stuff unless they also benefit, but that there are some potential customer benefits relevant to many sectors. We will conclude with some provisional answers to the question about the kinds of added value

business can offer, and some questions about the ‘how’, the barriers to delivering these benefits.

**We are planning a second roundtable in the autumn on the how.** Of course, some of the necessary actions will be specific to individual companies and sectors—but some will be economy wide, whether organised by business consortia or requiring government support. AETW and CUSP will research these and work with attendees and AETW members to prepare for this second roundtable, by the end of which we should have an action plan.

### Causes and manifestations of the trend

The trend will be the result of a policy response to the environmental crisis, but also of:

- Rising **raw material costs** (including energy and land)
- **Narrowing differentials** between developing and developed world wage costs
- Innovation in and diffusion of technology, particularly **information technology**
- Underlying changes in consumer **taste**.

It is worth remembering that the results of these development will not always lead to more environmentally friendly outcomes—for example the rise in the number of foreign holidays taken may lead to a rise in emissions.

The trend is and will be manifest in a range of ways, including:

- More raw-material **efficient production** techniques: recycling of finished goods, parts and raw materials, 3d printing, lighter packaging
- More **efficient use** of consumer durables: increased usage rates through hiring and ‘sharing’; more and better maintenance and repair
- **Electronic delivery** of information and music

<sup>1</sup> Dematerialisation is defined by UNEP as “the reduction of total material and energy throughput of any product and service, and thus the limitation of its environmental impact. This includes reduction of raw materials at the production stage, of energy and material inputs at the use stage, and of waste at the disposal stage.” The trend to lighter products goes back a long way: a study by Cap Gemini Ernst and Young in 2001 estimated that in the US GDP per pound of material rose from \$3.64 to \$7.96 between 1977 and 2000.

<sup>2</sup> One target that has been suggested is a reduction of material flows in the industrialised countries by a factor of 10, allowing a worldwide cut in material flows by half, while doubling worldwide prosperity.

- More **public transport** and less car usage
- Less **meat** consumption and food waste
- **Higher density housing** and smaller units
- Consumers choosing **quality over volume**: one good bottle of wine rather than two bad ones; lighter but high-quality furniture; durable and more expensive clothes
- **Saturation** of demand in certain product categories
- Consumers spending a higher proportion of their income on labour intensive **services**: restaurants, activities, culture, decent care when they are old, health
- Consumers choosing **leisure time over spending**: shortening their working week, growing their own vegetables.

Some of these trends are already well established. We give some examples where consumer choices are significant in the following.

### Changing consumer choices —some examples<sup>3</sup>

These examples do not necessarily reflect underlying changes in taste—they may reflect changing relative prices or other factors. Nor do they necessarily translate into declining sales—in the case of cars for example, rising UK population has balanced declining usage per head. In any case, rising developing world sales may counterbalance static developed world sales.

- **Public transport vs car**: car miles per capita in the UK fell by 8% between 2002 and 2014 and rail miles per capita rose by 39% between 2001 and 2013<sup>4</sup>—however new car registrations rose by over 25% between 2011 and 2015, possibly because of low interest rates.
- **High density housing**: the number of dwellings per hectare built on land not previously developed rose

from 22 to 33 in the UK between 2001 and 2011<sup>5</sup> (probably reflecting planning decisions more than consumer choice). Floor areas are also falling—and are now about half what they were 90 years ago.

- **Meat consumption**: EU beef consumption is projected to fall by 7.7% between 2014 and 2024 with smaller falls in pork and lamb consumption (although until recently UK meat consumption was rising)<sup>6</sup>
- **Lighter furniture**: statistics are difficult to come by, but here is one—the ratio of real terms value to weight of furniture imported and exported between US, Canada and Mexico increased by 21% between 2004 and 2016.<sup>7</sup>
- **Saturation**: in January Steve Howard of Ikea said we had reached peak demand for home furnishings in the west; sales of consumer durables in the UK fell from 26% to 22% of expenditure between 2002 and 2014<sup>8</sup>
- **Restaurants vs shops**: “People have had more disposable income but ... any spare money has gone on leisure and holidays rather than pure retail spend”(Ipsos);<sup>9</sup> “We are seeing people eating out rather than eating in” (Sainsbury’s chief executive Mike Coupe).<sup>10</sup> Discretionary expenditure on services (‘experiences’) rose from 21% to 22% between 2002 and 2014<sup>11</sup>
- **Activities and live culture**: “[UK] holidaymakers are... combining... events, shows or experiences with their holiday as well as taking multi-centre holidays; challenge holidays and activity holidays” (ABTA).<sup>12</sup> USA Dance inc. reported a 35.0% increase in the number of people taking ballroom lessons and attending ballroom events in the US between 2001 and 2011. Between 1987 and 2014 the share of consumer spending on live experiences and events relative to total U.S. consumer spending increased 70%.<sup>13</sup>
- **Putting money aside for care**: major insurance companies are (re-)launching life policies with care options in the UK (having abandoned this product category when they first tried a decade ago).<sup>14</sup>
- **Reduced hours**: the proportion of employees that regularly work over 45 hours each week has fallen from 26% in 1997 to under 20% in 2013.<sup>15</sup>

<sup>3</sup> Wine is a counter-example—people are still drinking bad wine and average real prices before tax have fallen recently

<sup>4</sup> Department for Transport statistics, adjusted by ONS population statistics

<sup>5</sup> Department for Communities and Local Government statistics

<sup>6</sup> Ensia.com, November 2015

<sup>7</sup> US Department of Transportation statistics

<sup>8</sup> Chris Goodall ‘Carbon commentary’ 24 February 2016 based on ONS Consumer Trends statistics

<sup>9</sup> Tim Denison of Ipsos Retail Performance, quoted in The Guardian 23 April 2016

<sup>10</sup> Quoted in Retail Week, July 2015

<sup>11</sup> Chris Goodall op cit

<sup>12</sup> Abta Travel Trends Report 2015

<sup>13</sup> Harris for Eventbrite ‘Millennials: fuelling the experience economy’ 2014

<sup>14</sup> Daily Telegraph 9 December 2014

<sup>15</sup> Chartered Institute for Personnel and Development fact sheet ‘Working Hours and Time off Work’ 2016

- **Vegetables:** in the USA households growing food at home or in a community garden was up 17% to 42 million between 2008 and 2013; the increase amongst younger households was 63% to 13 million.<sup>16</sup>

## Consequences and Issues

Overall these trends may raise profitability, at least in the short to medium term: rising wine prices create opportunities for differentiation and higher margins; higher density housing raises land prices; services tend to be more profitable than manufacturing and the gap between the two may be widening.<sup>17</sup> A German study published in 2010 indicated that the shift to dematerialisation would increase both wages and profits, but particularly profits<sup>18</sup>.

**However, there are potential losers** as well as winners, particularly amongst retailers and manufacturers—‘stuff’ businesses. Some of these trends suggest that in the long run such businesses will be selling fewer of whatever it is they currently sell, or at any rate finding it harder to increase volumes. The whole point of car leasing schemes is that fewer cars are needed. If food waste is reduced, less food will be sold. **Therefore, if they want to grow their revenues, they will have to find new ways of adding value**—making things ever cheaper will not be a very attractive strategy.

This roundtable is primarily about stuff, but **non-stuff businesses also face challenges**. Saturation can apply to any product: there is only so much entertainment one can consume, there are only so many experiences one can have. And if economy wide productivity growth stalls—a trend we are already seeing and likely to be exacerbated if the decline of stuff leads to lower physical capital intensity—then we may not see significant increases in demand overall. In addition, in a tight market the very biggest global players—Google and Amazon and the like—may make life difficult

for medium sized firms (as the Guardian is already finding). There may also be issues for landowners and developers as some retail categories decline or go on-line.

**Broadly there are three possible responses.** One is to **look for growth from the developing world** and accept at best static developed world revenues, perhaps accompanied by major cost cutting. A second is to gradually **shift the product mix towards services** for which demand is still growing. In the long run this growth may stagnate, but those who have established their positions before that may remain profitable. The third, which we are focussing on, is to **add value to ‘stuff’**, or indeed non-stuff products. Again, the potential for doing so isn’t infinite, but those who do it successfully in the medium term may establish strong market positions for the long term. So, the question is, is it possible to do this profitably and at scale, and if so how?

## An historical perspective

In answering this question, we suggest it is helpful to look back at previous major changes in the product mix—of course this doesn’t replace understanding of current customer attitudes or technology. At least some of these past changes can be categorised into four themes, each of which is a kind of customer benefit:

- Convenience—saving time and reducing hassle
- Identity—helping express who you are
- Sociability—facilitating good interaction with family, friends and acquaintances
- Activity—facilitating activities that require focus or effort.

The themes overlap—focus can contribute to sociability and sociability can contribute to identity and so on—and it is not, of course, a

<sup>16</sup> USA National Gardening Association ‘Garden to Table’ 2014

<sup>17</sup> The ONS reports that the average rate of return on services the third quarter of 2015 was 23.3%, the highest since the series started in 1997. The average profit margin on manufactured goods was 5.5%, the lowest since second quarter 2012. Of course services typically require less capital.

<sup>18</sup> Tobias Kronenberg, ‘De-materialisation of Consumption: a Win-Win Strategy?’ MPRA 2010

comprehensive list. However, we hope it is enough to get the conversation going.

### **Convenience**

**Many of the best-known product innovations in the 19<sup>th</sup> and 20<sup>th</sup> century increased convenience,** from the railway and the telephone, to the washing machine, the car and the supermarket, to at least some internet-based products. For the most part these were technological innovations that replaced an existing product (horse and cart) or process (hand washing) in a more convenient way, rather than a response to changing taste. The results saved time and reduced hassle for the vast bulk of the British people. Despite this, many people continue to report that they feel short of time and as a result stressed,<sup>19</sup> suggesting that improvements in this area remain fertile ground for innovation. To take the internet as an example, it has clearly contributed to convenience, but it has its limitations. After 20 years of effort<sup>20</sup>, the on-line food and grocery market is predicted to be only 4% of the total by 2018<sup>21</sup> and only 20% of shoppers do all or most of their grocery shopping on-line.<sup>22</sup> Accenture report that 82% of millennials (born 1980-2000)—even millennials—prefer physical to on-line shopping.<sup>23</sup> Many people find many internet transactions time-consuming and frustrating and, more broadly, we all know from our own experience as consumers that service quality often lags behind product quality.<sup>24</sup>

**The question is whether there are likely to be opportunities to innovate technically and to improve staff skills so as to increase convenience in ways that are profitable.** The convenience might be produced by the product itself, by the way it is sold, delivered and installed,

or by after sales support. For example businesses can design a more helpful form of choice, offering a better structured, even reduced, product range and expert, highly personalised and impartial recommendations.<sup>25</sup> They can offer really slick deliveries and make efforts to make customers feel 'wanted'.<sup>26</sup> They can offer on-going help with using or maintaining a product, and at the end of its life take it back for recycling—or at any rate make it more durable. The profit opportunity will probably be 'stickiness'—repeat purchase because it is easy—rather than premium prices, given the way the on-line market makes pricing very competitive.

### **Identity**

**The role of products, particularly clothing, furniture and household ornaments, in social display and in establishing a 'lifestyle'** has long been commented on. This is not simply a matter of keeping up with the Joneses but of asserting one's individuality and one's membership of this or that tribe. However, the form this role takes has changed, following technical and social changes. Thus, in the 18<sup>th</sup> century there was increased demand for well-made items amongst the 'middling sort' as urbanisation disrupted traditional identities and created a complex set of social gradations which could be expressed in different forms of display. In the 1950s innovation in dye manufacturing made more brightly coloured clothes affordable and fashions changed, both amongst those who had not known the war, and those who were keen to put both the war and austerity behind them. In the last decade, Apple's designers and mobile phone technologists have created new symbols of connection with others.

<sup>19</sup> For example, a US Gallup poll in 2007 reported 53% of people saying they are short of time and 40% saying they felt frequently stressed.

<sup>20</sup> Tesco started offering an internet-based service in 1997

<sup>21</sup> IGD research conducted in 2013

<sup>22</sup> Mintel 'On-line Grocery Retailing' March 2014

<sup>23</sup> Accenture 'Who are the millennial shoppers and what do they really want?'

<sup>24</sup> A Bain survey reported in Harvard Business review in 2007 revealed that 8% of customers thought they got superior service and 80% of businesses thought they offered it (<https://hbr.org/2007/02/understanding-customer-experience>). Some examples from my own experience: I do not buy my shirts on line because I do not know they will be delivered when I am in, and when I go to the shop I often find that the variety I want is out of stock. I have not bought several pieces of bathroom equipment because I need an expert to specify what I need and the job is too small for most plumbers; the high street brands I trust are not interested. Tackling trivial issues like these may not be easy but when it becomes possible it will be an opportunity because I may pay a premium and will certainly go back to the supplier.

<sup>25</sup> For more on designing choice see S. Iyengar and K. Agrawal 'A Better Choosing Experience' in *Strategy and Business*, November 2010

<sup>26</sup> Accenture op cit.

There will always be opportunities to create goods with this kind of symbolic content. Nowadays novelty often plays this role, and there has been a tendency towards an 'ironic' identification with brands. The question is **what brand values more in tune with dematerialisation can play this role in the future**—and not just for the customers of Patagonia. For example, can durability ever be chic? Can corporate values and behaviour really influence purchasing outside the existing 'Fairtrade market'?

### **Sociability**

In the 18<sup>th</sup> century, tea, coffee and sugar merchants became enormously wealthy by providing commodities which became the focus for new forms of sociability, namely the coffee house and, within the home, tea drinking, both partly the result of increased urbanisation. In the 21<sup>st</sup> century Mark Zuckerberg has done something rather similar with Facebook, partly a technology led phenomenon, and partly a result of the way people's networks have become physically dispersed and complex. On-line dating agencies provide a more niche example, both responding to and creating new norms of social behaviour. In the 50s and 60s the recorded music industry changed the social life of newly prosperous teenagers, while Henry Ford's success in the US 30 years earlier was at least in part down to his contribution to ending rural isolation and creating opportunities for excursions. Television, which arrived in British homes in the 1950s, contributed to a new form of family life, and, as Roy Thompson famously said, was a 'licence to print money'. More recently wide screen TV and football broadcasting has provided a new lease of life to some pubs and the sociability associated with them.

**All kinds of enthusiasms, from motorcycling to ice skating, require stuff to keep them going and**

**provide the basis for satisfying social encounters for people**, whether millennials or baby boomers. The stuff need not be an object like a football—it could also be a well-designed place, which encourages both sociability and spending. It is true that to make real money you often have to provide the product—the Harley Davidson for the biker, the best hotel views for the tourist—but then that is true of products in general. One potentially significant trend is the rise in the number of live events, which have become particularly popular amongst millennials. One study reported 72% of those attending them saying they'd like to increase their spending on experiences relative to physical things in the next year, with 79% saying that going to live events had deepened their relationships, and 69% that attending such events helped them connect better with their friends, their community and people around the world.<sup>27</sup>

Not everyone is in the business of organising rock festivals but **the question for any business is how it can link its technology to facilitating these kinds of benefits.**

### **Activity**

**Activities that require focus or effort by the participant**—playing sport or music, cooking, gardening, painting—**tend to generate higher levels of wellbeing** than more passive activities.<sup>28</sup> This can be manifest in a sense of achievement, self-efficacy, creativity, health and personal fulfilment. Nike provides perhaps the best known example of a commercial brand aligning itself with active consumption of this type, but other brands engage with consumers in a similar way, and perhaps not surprisingly, Google and advertising agency Ogilvy report that "Consumers choose the brands that engage them on their passions and interests 42% more often than they do those that simply urge them to buy the product being advertised."<sup>29</sup>

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<sup>27</sup> Harris op cit

<sup>28</sup> There is an extensive literature. See for example Matt Killingsworth 'Does mind-wandering make you unhappy?' (July 2013) at <http://greatergood.berkeley.edu>

<sup>29</sup> Thinkgoogle "When the path to purchase becomes the path to purpose"

**Brand positioning is, of course, underpinned by a product mix that chimes with changing patterns of active leisure pursuits.** This, of course, is in constant evolution. At different periods in the past, money spent on cameras, tennis rackets, pianos and dance halls has all grown. More recently, the gardening products market is reported to have doubled between 1991 and 2006 (but has been somewhat static since)<sup>30</sup>. Bicycle sales grew sharply to 2010, (but again have been static since)<sup>31</sup>. Gym membership is still growing and was at an all-time high (13.7%) in 2015.<sup>32</sup> Sales of activity holidays have been increasing and are predicted to increase further as the number of active elderly increase.<sup>33</sup> And so on.

We are not considering the precise trends, which are specific to each industry but instead a broader question. **To what extent can business expand the opportunities associated with active consumption?** It can use advertising of course but can information and training products that complement physical products, and help remove some of the barriers to wider take-up also increase sales? Work by NEF a few years ago showed that negative self-perception can inhibit take-up<sup>34</sup>: can business ever play a role in countering this? Can community-based CSR programmes of the kind Kingfisher have run contribute to this? What kind of messaging will work and what will not work?

## Report on the Event

A roundtable about these issues was held on 23 May 2016, attended by nine consumer business executives, eight business advisors, seven academics, and two think tank personnel. It was

hosted by lawyers Freshfields Bruckhaus Deringer.

CUSP Director Tim Jackson outlined the basis of existing contemporary business models: sale of more stuff leads to more revenue, leads to more profit. Any product or service which requires input of natural resources, materials or energy directly or indirectly within its lifecycle involves 'stuff'. There has already been recognition of the associated problems and business has developed new models including the circular economy and product-service systems. But can business shift to providing more and more value from less and less stuff in a way that goes beyond simply increasing material efficiency?

Charles Seaford then presented a view of how this might be done—how 'more profit from less stuff' could result from providing four customer benefits traditionally associated with product innovation—convenience, identity, sociability and activity (see *Briefing on the issues* above).

Representatives of BT, Sky and Marks and Spencer then made short contributions, and these were followed by a roundtable discussion. The contributions and discussion were largely about three things: sources of added value, making change happen, and production efficiencies (this last not the subject of the roundtable, but recorded in outline here).

### Sources of Added Value

IT has dematerialised consumption by improving customer convenience and will continue to do so. Added value can come from greater consumer control over, for example, delivery times. However, the question as to whether products can be 'nested' within quality service relationships in b to c markets remained open.

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<sup>30</sup> [www.britishgardenshed.co.uk](http://www.britishgardenshed.co.uk), Keynote

<sup>31</sup> ONS statistics

<sup>32</sup> LeisureDB '2015 State of the UK Fitness Industry'

<sup>33</sup> Keynote

<sup>34</sup> New Economics Foundation, 'Understanding the Barriers to Raising Population Wellbeing' 2011

Increasing the convenience of shopping can also *increase consumption of stuff* (e.g. Amazon Prime and 1-click purchasing).

**Personalisation and customisation represent new opportunities** for non-material added value. For example, it would be possible to optimise diets using preferences and DNA technologies. Personalisation and localisation, based on IT and social media, also offer the opportunity to tap into identity as a source of value.

**There are also opportunities to add on dematerialised services to existing material offers**—for example landlords can offer additional services to compensate for renting less space.

**Products, services or other initiatives which support customer activity** help maintain a positive brand reputation, customer ‘stickiness’ and inspire new people to work in the industry.

**Much of the conversation was about increasing consumption efficiency**—that is how to create the same benefit from broadly the same product, but more efficiently in terms of stuff. Issues covered included:

- **Reducing consumer food waste**, which requires engagement with consumers (and overlaps with optimising diet, since this in aggregate this would involve lower calorific intake)
- **Optimising use of buildings**, which are used one third of the time; one way of doing this is through multi-use buildings
- **More second-hand sales**, which requires high quality, long lasting products
- **Better purchasing decisions**, which requires better provision of information
- **Recycling** (circular economy), which may require business model change, eg from outright sale to leasing.

**Adding commercial value is not the same things as maximising wellbeing.** For example, IT may create opportunities to add value without stuff, e.g. through entertainment and social media. However, this could lead to reduction in physical sociability, more couch potatoes, and reduced attention spans.

## **Make change happen**

This part of the discussion focussed on three topics: sources of disruptive innovation, the role of collaboration between businesses, and the need for and inadequacies of public policy.

**One possible source of innovation is investors**, who push for change in investee companies because they see that ‘more profits from *more stuff*’ is unsustainable financially as well as environmentally.

**However entrepreneurial activity is equally important.** Even given investor pressure—and even given the widespread recognition in large companies that innovation in this area is both commercially and ethically right—it was questioned whether disruptive innovation *can* happen within large organisations—at least without acquisitions or special units that drive it ‘from the outside’. Hence the role of entrepreneurs—who may need to be encouraged and supported. At the very least regulatory obstacles should be reduced: in some industries such as energy, the regulator is risk averse and innovation is not encouraged (see below).

**Collaboration between businesses is only needed in some circumstances.** Sometimes a trend is well established, or the incentives are already clear. For example, if a company can make progress through bilateral discussions with suppliers, then opportunities for first mover or even sustained competitive advantage may exist, perhaps by brand building. Collaboration is then inappropriate. However, in some cases bilateral discussions don’t work—for example these will not lead to better quality control in the building industry, or more effective further education. Collaboration is also needed when supporting community wellbeing: isolated activities are much less likely to work.

**Some industries are used to collaboration:** it has been critical to the success of IT and the internet: a ‘walled garden approach’ would have hampered its success. Successful collaboration between competitors in other industries is occurring, for example through BITC and the Consumer Goods platform. Naturally given the

effort involved, the associated profit opportunity must be clear—potentially defensive if you think new entrants will disrupt. There are also competition issues here (see below).

**However, business activity is shaped by the policy framework** and the broader state of society. For example, it is more difficult to get rid of plastic water bottles in places with poor water sanitation. At the broadest level, the macro-benefits of a dematerialised economy (e.g. substituting national labour for imported stuff) need to be modelled and an appropriate policy strategy developed. The SDGs and COP21 could be a useful framework for joined up policy, combining social, economic and environmental objectives.

Several specific policy issues were raised:

- **the EU Circular Economy initiative is not supporting dematerialisation adequately.** Without regulation or governance of closed loop processes, the incentives are to go around the loop as quickly as possible
- **Energy regulation is focussed on competition alone,** on the assumption that this is a commodity market. Ofgem needs to factor in the need for innovation, and new market design is needed at EU level.
- **The scope of CMA market studies should extend to public interest issues** such as sustainability: concerns about barriers to innovation in this field should both be a legitimate trigger for a study and be one of the criteria in assessing whether remedial action is needed.
- **Food policy has led to unsustainably low prices** (whether achieved through farmer subsidies or targeted welfare payments such as food stamps): prices have declined by 1% p.a. for 100 years +. This is damaging in terms of employment and the environment.
- **Sustainability requires an industrial policy that neutralises losers' losses** (and takes into account employee position generally); it is likely that any effective policy will be 'mission-led' as advocated by Mazzucato.

It was also agreed that as far as this project is concerned, the issues are different in different

industries and industry specific roundtables would be helpful.

## **Production efficiencies**

This was not on the agenda of the roundtable, but the following observations were made:

- The Internet has provided an 'engine' for dematerialisation. New technologies provide further promising opportunities to increase material efficiency
- Emission reductions have been achieved in set top box materials (20% smaller, reducing plastics and metals), increasing energy efficiency and integrating Wi-Fi.
- However, in IT hardware — eg set top boxes— dematerialisation requires product innovation using life cycle analysis, since carbon emissions in the use phase far exceed direct emissions from production.
- It is also the case that increasing IT capability has a physical resource and energy use consequence.
- Food supply chain issues such as water footprint need careful consideration when deciding on where disruption should occur and what is required.
- Food waste: In the food industry, reducing waste requires stakeholder engagement with farmers

There is a focus on capital cost but not enough on operational costs over the life cycle of a product.